

OFFICE CORRESPONDENCE

FROM	TO	DATE
	EEP	

SUBJECT: Request for Assistance
Oak Ridge Stream Contamination Health Hazards

This office has recently been learning a great deal about pollution of waters resulting from Department of Energy operations in Oak Ridge. The question of "how dangerous is this to the public" continuously arises. On the forefront of this matter is concern over the pollution of East Fork Poplar Creek which flows from the Y-12 nuclear weapons factory through the City of Oak Ridge. Data shows this stream to be contaminated with at least mercury, uranium, thorium, plutonium, and PCB's. Fish in the stream contain excess levels of mercury and as a result, the entire stream was posted in December 1982 warning the public not to eat the fish.

With the coming of summer and the accessibility of the stream to the public, there is growing concern over the hazards to the public. The stream runs through a housing project, and a school yard as well as other easy access points. There are numerous side issues in this matter that might also be examined by Environmental Epidemiology such as gardening and grazing in the contaminated areas.

This office requests assistance in evaluating the hazards and properly informing the public. Please contact this office as soon as possible regarding assistance on this matter.

A.D.M.

FROM	DATE

ADM:bp

TO

[illegible]

PH-0001
SR 377

Environmental Health Concerns
East Fork Poplar Creek
Oak Ridge

1. Public Notification
 - a. News Ads (Former notices/news)
 - b. Public Notice
 - c. Stream Reposting
2. Home Veg. Gardens
 - a. Transported Sediments
 - b. Flood Plain
3. Sediment Contact
 - a. Recreation in Flood Plain
 - b. Wading, etc.
4. Vapors - Contact
5. Livestock
 - a. Meat
 - b. Milk
6. Landscaping
7. Fish - (Contact with TWRA)
 - a. Consumption
 - b. Commercial Fishing - Markets
8. Parameters
 - a. Hg
 - b. U
 - c. Th
 - d. Pu
 - e. PCB

CITY OF OAK RIDGE



615 483-5671 • POST OFFICE BOX 1 • OAK RIDGE TENNESSEE 37930

May 31, 1983

Mr. David McKinney
Division of Water Quality
The Alex B. Shipley Regional
Health Center
1522 Cherokee Trail
Knoxville, Tennessee 37920

Re: Mercury Contamination
E. Fork Poplar Creek

Dear Mr. McKinney:

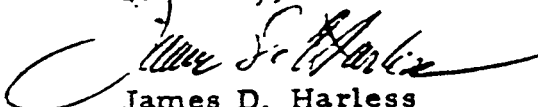
With reference to the mercury contamination of East Fork Poplar Creek, Oak Ridge, we have some information to report to you at this time. We also request a response from the Tennessee Department of Public Health about whether this aspect of mercury distribution is a potential health problem for Oak Ridge citizens, and if so, what corrective action is indicated. If additional soil sampling is indicated, do you wish for the City to submit this request to DOE, or might the State wish to submit direct request?

The City had completed some dredging of Poplar Creek, prior to notification about mercury in the creek and soil sediment. Some of this soil was used as topsoil over new sewer main trenches adjacent to two streets, Emory Valley Road and Fairbanks Road.

On May 19, 1983 we collected soil samples in front of Jefferson (Fairbanks) Junior High School, on the west side of the street right-of-way, over a section of filled sewer line trench approximately 1000 feet long. The laboratory results are enclosed and seem to range from a low of 80 ppm to a high of 358 ppm total mercury for the nine sample areas. Sample #1 is a background sample outside road right-of-way.

If you require additional information, please so advise. Enclosed is a copy of the laboratory certificate of analysis, total mercury, and the map showing the location of sample collection. Thank you, in advance, for your anticipated assistance and information regarding the evaluation and/or correction(s) for this specific aspect of the Oak Ridge mercury distribution.

Sincerely,


James D. Harless
Environmental Codes

rp
Enclosures

REPRODUCTION

IT ANALYTICAL SERVICES

STEWART LABORATORIES DIVISION

5815 Middlebrook Pike • Knoxville, Tennessee 37921 • 615-588-6401

CERTIFICATE OF ANALYSIS

TO: Mr. James D. Harless
Code Enforcement Office
City of Oak Ridge
P. O. Box 1
Oak Ridge, TN 37830

DATE REPORTED: May 23, 1983
PROJECT CODE OAK 16380
ORDER NUMBER:

Sample Description: Ten (10) soil samples received May 19, 1983

Concentration units are $\mu\text{g}/\text{gram}$ ppm)

Mercury

#1	0.15
#2	80.
#3	123.
#4	195.
#5	141.
#6	129.
#7	248.
#8	111.
#9	358.
#10	349.

Sworn to and subscribed before me this 23rd
day of May, 1983

My commission expires December 14, 1983

E. A. [Signature]
Notary Public

Allyn R. Moore
Title: Laboratory Manager

Approved By



Accredited by the American Association for Laboratory Accreditation in the chemical field of testing, as listed in the current AALA Directory of Accredited Laboratories

CITY OF
OAK RIDGE



JUN 03 1983

615 / 483-5671 • POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37830

May 31, 1983

Mr. David McKinney
Division of Water Quality
The Alex B. Shipley Regional
Health Center
1522 Cherokee Trail
Knoxville, Tennessee 37920

Jerry
Ingram

ADM ✓
BWS
COPY EPIDEM
INITIAL RESP
TO JOH BY
Phone

Re: Mercury Contamination
E. Fork Poplar Creek

Dear Mr. McKinney:

With reference to the mercury contamination of East Fork Poplar Creek, Oak Ridge, we have some information to report to you at this time. We also request a response from the Tennessee Department of Public Health about whether this aspect of mercury distribution is a potential health problem for Oak Ridge citizens, and if so, what corrective action is indicated. If additional soil sampling is indicated, do you wish for the City to submit this request to DOE, or might the State wish to submit direct request?

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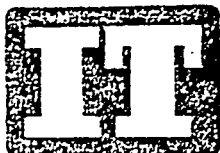
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If you require additional information, please so advise. Enclosed is a copy of the laboratory certificate of analysis, total mercury, and the map showing the location of sample collection. Thank you, in advance, for your anticipated assistance and information regarding the evaluation and/or correction(s) for this specific aspect of the Oak Ridge mercury distribution.

Sincerely,

A handwritten signature in cursive script, appearing to read "James D. Harless", is written over a horizontal line.

James D. Harless
Environmental Codes



IT CORPORATION

IT ANALYTICAL SERVICES

STEWART LABORATORIES DIVISION

5815 Middlebrook Pike • Knoxville, Tennessee 37921 • 615-568-6400



CERTIFICATE OF ANALYSIS

TO Mr. James D. Harless
Code Enforcement Office
City of Oak Ridge
P. O. Box 1
Oak Ridge, TN 37830

DATE REPORTED May 23, 1983
PROJECT CODE OAK 16380
ORDER NUMBER

Sample Description: Ten (10) soil samples received May 19, 1983

Concentration units are $\mu\text{g}/\text{gram}$ (ppm)

Mercury

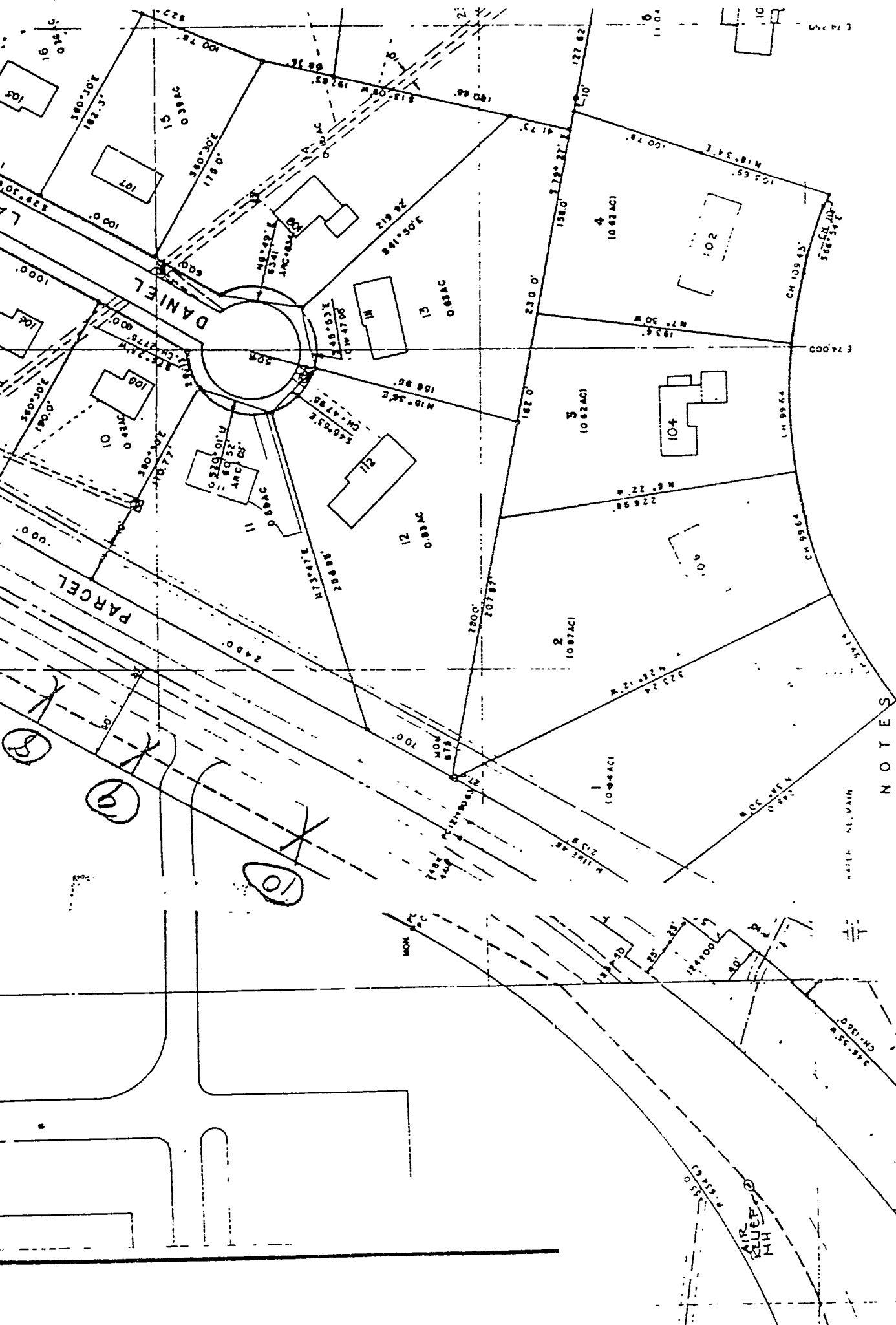
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#3	123.
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#7	248.
#8	111.
#9	358.
#10	349.

Sworn to and subscribed before me this 23rd
day of May, 1983
My commission expires December 14, 1983

Kerry Purdie

Laboratory Manager

Approved By



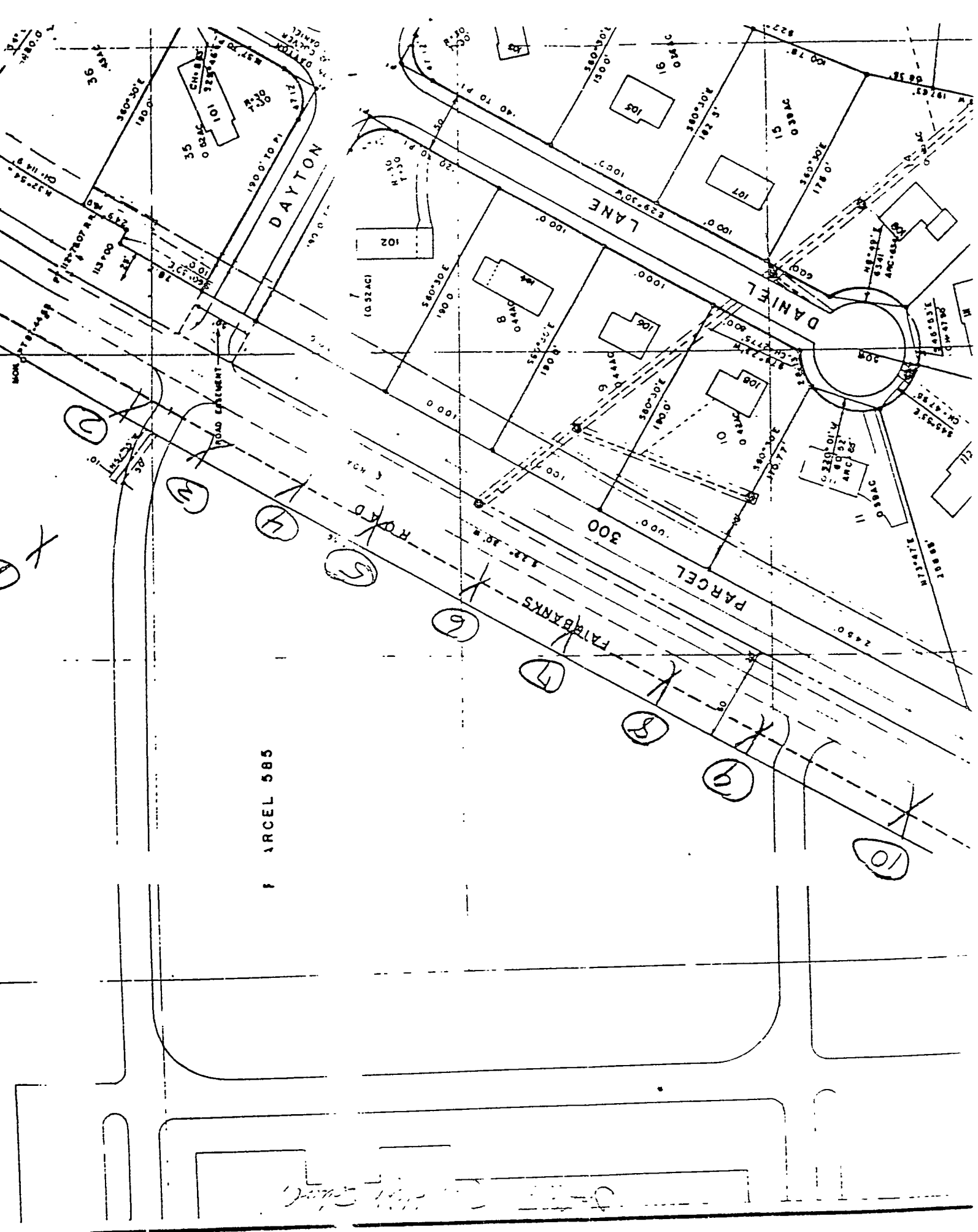
NOTES

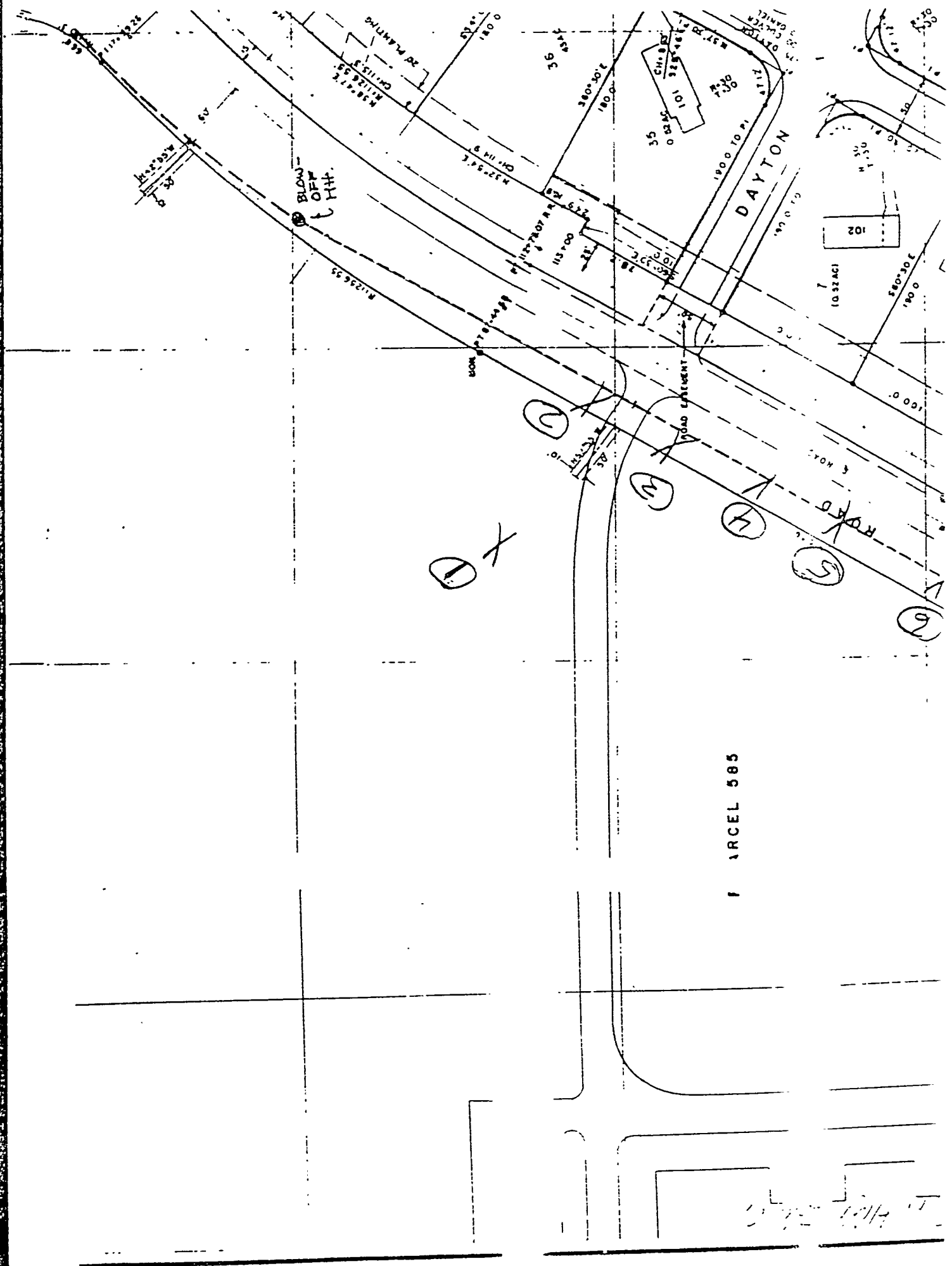
1. All dimensions are in feet unless otherwise noted.
 2. The map is based on the 1983 datum.
 3. The map is for informational purposes only and should not be used for legal or engineering purposes without the assistance of a professional surveyor.

W BASIN



AIR
 RELEASE
 M/H





CITY OF OAK RIDGE



JUN 23 1983

615 / 483-5671 • POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37830

June 20, 1983

Mr. Gerald E. Ingram
Director of Environmental
Epidemiology
Tennessee Department of Public Health
150 9th Avenue, North
Nashville, Tennessee 37203

Dear Mr. Ingram:

Based on our telephone conversation this date, enclosed is a copy of our May 31 letter and request to the Tennessee Department of Public Health, through Mr. David McKinney. We would appreciate a response, as Mr. McKinney has indicated that your office will assist with the evaluation of the mercury problem, the extent of any hazard(s), and appropriate actions to minimize or eliminate present or future health and safety hazards for Oak Ridge or area residents.

We appreciate your desire to share available information with the City, and your interest in providing assistance to define the extent of any present health problems, and to take action to minimize or eliminate any hazards resulting from mercury or other toxic materials.

Please let me know if we can be of assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim Harless", is written over the typed name.

James D. Harless
City of Oak Ridge
P.O. Box 1
Oak Ridge, Tennessee 37830

rp
Enclosure

CITY OF OAK RIDGE



JUL 26 1983

615 / 483-5671 • POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37830

July 22, 1983

Mr. Gerald E. Ingram
Director of Environmental
Epidemiology
Tennessee Department of
Public Health
150 9th Avenue, North
Nashville, Tennessee 37203

Dear Mr. Ingram:

As you know, the City of Oak Ridge contracted a private laboratory to analyze ten (10) soil samples collected from the surface of the filled sanitary sewer line trench in front of Jefferson Junior High School, Fairbanks Road. The May samples for mercury were reported to the Tennessee Department of Public Health with a May 31 submission to David McKinney, Water Quality Division, and a June 30 cover letter to your office. (Additional copy of that lab report is enclosed)

We appreciate the field visit by your staff members, and the effort of your department to work to define action levels for toxic materials of current concern within Oak Ridge.

This month we had further analysis made of the three higher mercury soil samples from the May sample collection. Samples #7, #9, and #10 were evaluated for some of the other toxic materials mentioned during the first Multi-Agency Task Force meeting, including PCB, uranium, thorium, lead, and beryllium. The results of these samples are also enclosed, for your review and recommendation for any action levels and related public health protection information, in addition to your on-going consideration about mercury.

Finally, we are aware of one location where the soil which came from earlier creek dredging was given to an individual, but not yet spread into the intended garden area. We submitted a soil sample taken from this load of soil, and have just obtained the result of mercury content.

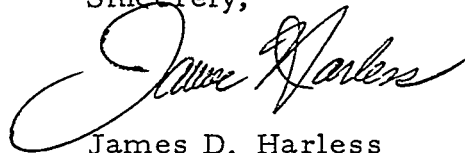
Mr. Gerald E. Ingram
Director of Environmental Epidemiology

Page 2

The laboratory reports 239 ppm, Stewart Laboratory Sample A1-78833. Although I assume this load of soil should be removed from the property, and not unnecessarily spread into the garden area, we will need your advice and/or advice from the Solid Waste Division, Hazardous Wastes, to establish removal and disposal criteria, site location, etc.

If you need additional information, please let me know. I understand that the second Multi-Agency Task Force Meeting will be on August 18, 1983, and I am sure your public health peers will share Task Force information with your office.

Sincerely,

A handwritten signature in cursive script, appearing to read "James D. Harless".

James D. Harless
Code Enforcement Office

rp

Attachments

cc: M. Lyle Lacy, III, City Manager
Lowell Struck, Public Works Director
Lucien Faust, Planning Director
Charles Coutant, EQAB Chairman
David McKinney, Water Quality
Robert Smallridge, Superintendent,
Oak Ridge Schools
Task Force, c/o David McKinney
John Leonard, Division of Solid Waste
Jerry Wing, DOE



IT ANALYTICAL SERVICES

STEWART LABORATORIES DIVISION

5815 Middlebrook Pike • Knoxville, Tennessee 37921 • 615-588-6401



CERTIFICATE OF ANALYSIS

TO: City of Oak Ridge
ATTN: Mr. James D. Harless
Code Enforcement Office
P. O. Box 1
Oak Ridge, TN 37830

DATE REPORTED: July 14, 1983
PROJECT CODE OAK 16576
ORDER NUMBER:


Sample Description: Three (3) soil samples received June 28, 1983

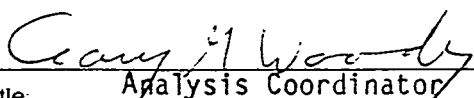
Concentration units are $\mu\text{g}/\text{gram}$ (ppm)

	<u>Aroclor 1242 and/or 1016</u>	<u>Aroclor 1254</u>	<u>Aroclor 1260</u>	<u>Total Aroclors</u>
#7	<0.05	0.93	1.2	3.4
#9	<0.05	1.3	1.5	2.8
#10	<0.05	0.83	1.2	2.0

Sworn to and subscribed before me this 14th
day of July, 1983

My commission expires December 21, 1983


Notary Public


Title: Analysis Coordinator
Approved By



Accredited by the American Association for Laboratory Accreditation in the chemical field of testing, as listed in the current AALA Directory of Accredited Laboratories



IT CORPORATION

IT ANALYTICAL SERVICES

STEWART LABORATORIES DIVISION

5815 Middlebrook Pike • Knoxville Tennessee 37921 • 615-588-6401



CERTIFICATE OF ANALYSIS

TO: City of Oak Ridge
ATTN: Mr. James D. Harless
Code Enforcement Office
P. O. Box 1
Oak Ridge, TN 37830

DATE REPORTED: July 14, 1983
PROJECT CODE OAK 16576
ORDER NUMBER:

Sample Description: Three (3) soil samples received June 28, 1983

Concentration units are $\mu\text{g}/\text{gram}$ (ppm)

	7	9	10
Uranium	<90.	<90.	<90.
Thorium	<18.	<18.	<18.
Lead	104.	103.	96.
Beryllium	0.97	1.15	0.97

Sworn to and subscribed before me this 14th
day of July, 1983

My commission expires December 21, 1983

Notary Public

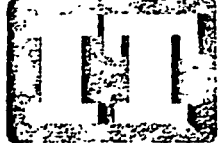
Title

Analysis Coordinator

Approved By



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ITT CORPORATION

ITT ANALYTICAL SERVICES

STEWARD LABORATORIES DIVISION
5815 Middlebrook Pike • Knoxville, Tennessee 37921 • 615-693-6401

CERTIFICATE OF ANALYSIS

TO: Mr. James D. Harless
Code Enforcement Office
City of Oak Ridge
P. O. Box 1
Oak Ridge, TN 37830

DATE REPORTED May 23, 1983
PROJECT CODE OAK 16380
ORDER NUMBER

Sample Description: Ten (10) soil samples received May 19, 1983

Concentration units are $\mu\text{g/g-gram ppm}$)

#1
#2
#3
#4
#5
#6
#7
#8
#9
#10

Mercury

0.15
80.
123.
195.
141.
129.
248.
111.
358.
349.

Sworn to and subscribed before me this 23rd
day of May, 1983
My commission expires December 14, 1983
James E. Harless
Notary Public

Walter P. Moore
Title Laboratory Manager
Approved By



Accredited by the American Association for Laboratory Accreditation in the chemical field of testing as listed in the current AALA Directory of Accredited Laboratories



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

July 27, 1983

Mr. Chuck Pietrosewicz
EPA Region 4
Emergency and Remedial Response Branch
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Pietrosewicz:

Attached for your information and possible further action are copies of conclusions drawn by Environmental Epidemiology relative to results furnished to us by DOE of environmental samples collected in the Oak Ridge vicinity for mercury analysis. A letter, as requested, has been sent with individual results to those identified with an asterisk. Please forward our conclusions to others listed in this transmittal as appropriate.

It was agreed that the City of Oak Ridge would be responsible for blanking out sufficient information in each report to preserve the anonymity of specific property owners as per their requests to DOE. Copies are then to be forwarded by the City to Ms. Dorothy Dismuke, Chief Reference Librarian at the Oak Ridge City Library for placement there in an effort to make them readily available to the public or concerned individuals.

Also enclosed is a copy of the recently released Batelle Report, Vol. 1 and 2. We are requesting that appropriate CDC/EPA individuals review and critique this report. Please also include any comments relative to our approach and conclusions regarding the enclosed sample results report.

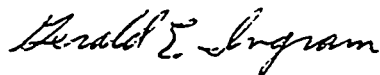
Further, we are requesting that CDC/EPA provide us with what you feel would be an action level for total mercury in soil. Currently, there is no such standard. Based upon school children soon returning to classes in Oak Ridge, we have established a deadline of August 15, 1983 for ourselves relative to making a decision on this matter.

We certainly appreciate your attention to the above items and look forward to developing a close working relationship and open lines of communication with you. This coordinated effort we are attempting to achieve should prove highly beneficial to each of our agencies.

Mr. Chuck Pietrosewicz
Page Two
July 27, 1983

If you have any questions or wish to discuss any portion of this transmittal, please contact us.

Sincerely,

A handwritten signature in cursive script, reading "Gerald E. Ingram".

Gerald E. Ingram
Director
Division of Environmental Epidemiology

GEI/tg 860/disc

Enclosures



EHS 9/6

TKC 9/6

TKC 9-6

CB

TKC

cc: D. McKinney
P. Turri

August 17, 1983

Mr. Jonathan A. Barrack
1308 Clinch Avenue, Apt. L
Knoxville, TN 37916

Dear Mr. Barrack:

Governor Alexander has requested that I respond to your letter regarding mercury spills in the Oak Ridge area. Please be assured that we too are very much concerned with the health and environmental implications of the mercury contamination in the area.

In an attempt to fully evaluate the situation, we are currently reviewing data which has been provided by the Department of Energy on mercury in water, soils, sediments, plants and animals in the area. Most of this data has been collected because of the concerns and at the request of citizens in the Oak Ridge Community.

We have recently been able to evaluate some of this data and provide appropriate responses to several of these requests where the mercury concentration appears to be within normal expected and acceptable background levels or below established health standards. Those samples showing higher concentrations of mercury in the soil are extremely difficult to deal with due to the lack of a formally established national health standard for mercury in soil. We are attempting to evaluate this data with the help of the National Centers for Disease Control (CDC) and hope to provide some temporary clarification of this situation to the involved citizens. We will continue to expeditiously pursue this evaluation to enable us to provide our best advice to the local citizens. Our current information indicates no imminent health hazard with respect to mercury contamination.

We are also concerned that contamination from many other substances, in addition to mercury, may possibly have occurred in the area. At this point, however, there is so little information and data available that we are unable to formulate any realistic or preliminary scope of the situation. We will again continue to obtain and evaluate data on the substances to arrive at an acceptable resolution of this situation.

In both of these cases, mercury and possible other substance contamination, we are committed to taking appropriate action with regard to protection of both public health and the environment.

Mr. Jonathan A. Barrack
Page Two
August 17, 1983

If you should have further questions relating to this situation in Oak Ridge, please contact Mr. Terry Cottrill at (615) 741-3657.

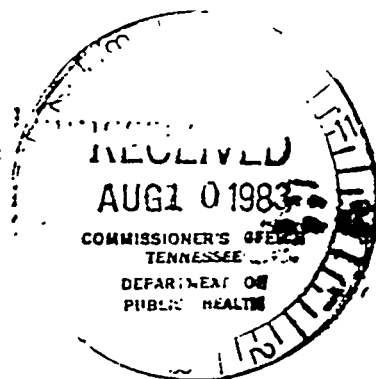
Sincerely,

JAMES E. WORD
Commissioner

JEW/TC/tg

cc: Governor Alexander

August 9, 1983



LAMAR ALEXANDER GOVERNOR

Mr. Jonathan A. Barrack
1308 Clinch Avenue, Apt. L
Knoxville, TN 37916

#909

Dear Jonathan,

Thank you for your letter concerning the mercury contamination in the Oak Ridge area.

Our Department of Health and Environment has a great deal of information that we want to examine fully before we proceed further on this matter. I assure you that I will be involved in key decisions on what course of action to pursue.

I have spoken publicly many times on the hazardous waste disposal situation and we are continuing our efforts to clean up our state. I certainly share your concern, and I appreciate your letting me know your feelings directly.

I am sending your letter to Health and Environment Commissioner Jim Word, and am asking him to let you know what we are doing to solve the Oak Ridge problem.

Thanks again for writing.

Sincerely,

Lamar Alexander

LA/mps

cc: Commissioner Jim Word ✓

100-151033

1200 Glitch Avenue, Apt. 1
Knoxville, TN 37904

Governor Lamar Alexander
State Capitol
Nashville, TN 37210

Dear Governor Alexander:

How would you feel if you, your family, or close friends were affected by mercury poisonings? Like all of us, you would be checked and look for someone to answer your questions.

Since the disclosure of the mercury spills in my hometown, my family and friends are curious to know the exact effects we may be experiencing or may experience in the future. So far, neither EPA nor TVA has answered our questions thoroughly. We think you can help to deliver all the facts to the public.

Will you publicly speak out and join the citizens of East Ridge in bearing the facts of the mercury spills? Just one speech, one public appearance, or a news release would show your commitment to keep the public of the situation.

I would appreciate your writing me and letting me know what action you will take which will enable us to carry on our lives without the constant fear of our children being poisoned by mercury.

Sincerely,

Jonathan A. Barrack

Jonathan A. Barrack

September 15, 1983

Mr. Dick Egli
U. S. Department of Energy
Oak Ridge Operations Office
P. O. Box E
Oak Ridge, Tennessee 37830

Dear Mr. Egli:

In the report of DOE sampling results for mercury from Oak Ridge, Tennessee, transmitted to you July 27, 1983, an error has been noted. Attached is the corrected version of these results. Please take appropriate action as called for, after noting the specific changes and deletions that have been made. Also, please notify anyone you may have transmitted the report to of the corrections as we are in the process of doing.

Although the inhouse Tennessee mercury standard for the protection of fish and aquatic life in water is lower than previously stated, the results still fall below the corrected standard. As previously concluded, no adverse human health effects would be expected due to mercury contamination with regard to these samples.

We apologize for any inconvenience this may have caused. If you have any questions or need further clarification please contact us.

Sincerely,

Gerald E. Ingram
Director
Environmental Epidemiology

GEI/CC/dlc 5-16

July 27, 1983

Director of YWCA
1660 Oak Ridge Turnpike
Oak Ridge, Tennessee 37830

Dear Director:

The following samples were collected and analyzed for Mercury by the Oak Ridge Associated Universities (ORAU) for the Department of Energy (DOE). The results furnished by DOE to our Department for evaluation were:

<u>Location</u>	<u>Sample Number</u>	<u>Date Collected</u>	<u>Type Sample</u>	<u>Results (PPM)</u>	<u>Standard or Background (PPM)</u>
Garden Behind- Soil from asphalt pad	83-0026	June 8, 1983	Soil	.30	0.01-3.4
Southeast Corner	83-0041	June 9, 1983	Soil	0.25	0.01-3.4
20 ft. from East Edge of garden	83-0042	June 9, 1983	Soil	0.30	0.01-3.4
20 ft. from East Edge of garden	83-0043	June 9, 1983	Soil	0.20	0.01-3.4
Center of Garden	83-0044	June 9, 1983	Soil	0.20	0.01-3.4
Southwest corner of garden	83-0045	June 9, 1983	Soil	0.20	0.01-3.4
Northwest corner of garden	83-0046	June 9, 1983	Soil	0.17	0.01-3.4

For your convenience, we have listed either standard or background levels for comparison purposes. Based on the above results, there would be no adverse human health effects expected.

Please feel free to contact Mr. David McKinney of the Knoxville Basin Office if further clarification of these results is necessary. He can be reached at (615) 546-9221 or Division of Water Management, Tennessee Department of Health and Environment, 1522 Cherokee Trail, Knoxville, TN 37920.

Sincerely,

Gerald E. Ingram
Director
Environmental Epidemiology

GEI/CC/sh EEP-1

September 15, 1983

Mr. Lyle Lacy
City Manager
City of Oak Ridge
P. O. Box 1
Oak Ridge, Tennessee 37830

Dear Mr. Lacy:

In the report of DOE sampling results for mercury from Oak Ridge, Tennessee, transmitted to you July 27, 1983, an error has been noted. Attached is the corrected version of these results. Please take appropriate action as called for, after noting the specific changes and deletions that have been made. Also, please notify anyone you may have transmitted the report to of the corrections as we are in the process of doing.

Although the inhouse Tennessee mercury standard for the protection of fish and aquatic life in water is lower than previously stated, the results still fall below the corrected standard. As previously concluded, no adverse human health effects would be expected due to mercury contamination with regard to these samples.

We apologize for any inconvenience this may have caused. If you have any questions or need further clarification please contact us.

Sincerely,

Gerald E. Ingram
Director
Environmental Epidemiology

GEI/CC/dlc 5-16



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

August 29, 1983

Mr. Victor Blocher
1101 Tuskegee Drive
Oak Ridge, Tennessee 37830

Dear Mr. Blocher:

In the sampling results letter transmitted to you on July 27, 1983, the "Standard or Background" levels for mercury quoted were incorrect. The correct version should read:

<u>Location</u>	<u>Sample Number</u>	<u>Date Collected</u>	<u>Type Sample</u>	<u>Results (PPM)</u>	<u>Standard or Background (PPM)</u>
1101 Tuskegee Dr.	83-0020	May 27, 1983	Well Water	.0001	.002

Although the standard or background level is lower than previously stated, your well water results still fall below the corrected standards. As concluded in the previous letter, no adverse human health effects would be expected.

Please feel free to contact Mr. David McKinney of the Knoxville Basin Office if further clarification of these results is necessary.

Sincerely,

Gerald E. Ingram
Director
Environmental Epidemiology

GEI/CC/sh EEP-1



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

July 27, 1983

Mr. Dick Egli
U. S. Department of Energy
Oak Ridge Operations Office
P. O. Box E
Oak Ridge, Tennessee 37830

Dear Mr. Egli:

Attached for your information and possible further action are copies of conclusions drawn by Environmental Epidemiology relative to results furnished to us by DOE of environmental samples collected in the Oak Ridge vicinity for mercury analysis. A letter, as requested, has been sent with individual results to those identified with an asterisk. Please forward our conclusions to others listed in this transmittal as appropriate.

It was agreed that the City of Oak Ridge would be responsible for blanking out sufficient information in each report to preserve the anonymity of specific property owners as per their requests to DOE. Copies are then to be forwarded by the City to Ms. Dorothy Dismuke, Chief Reference Librarian at the Oak Ridge City Library for placement there in an effort to make them readily available to the public or concerned individuals.

Should you have any questions, please contact us.

Sincerely,

Gerald E. Ingram
Director
Division of Environmental Epidemiology

GEI/tg 860/disc



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

July 27, 1983

Mr. David McKinney
Division of Water Management
Alex. B. Shipley Regional Health Center
1522 Cherokee Trail
Knoxville, Tennessee 37920

Dear Mr. McKinney:

Attached for your information and possible further action are copies of conclusions drawn by Environmental Epidemiology relative to results furnished to us by DOE of environmental samples collected in the Oak Ridge vicinity for mercury analysis. A letter, as requested, has been sent with individual results to those identified with an asterisk. Please forward our conclusions to others listed in this transmittal as appropriate.

It was agreed that the City of Oak Ridge would be responsible for blanking out sufficient information in each report to preserve the anonymity of specific property owners as per their requests to DOE. Copies are then to be forwarded by the City to Ms. Dorothy Dismuke, Chief Reference Librarian at the Oak Ridge City Library for placement there in an effort to make them readily available to the public or concerned individuals.

Also enclosed for your information is a copy of the sample identification material which was also furnished to us by DOE. Should you have any questions, please contact us.

Sincerely,

Gerald E. Ingram
Director
Division of Environmental Epidemiology

GEI/tg/860

Enclosure



TENNESSEE DEPARTMENT OF PUBLIC HEALTH
Environmental Management and Quality Assurance Administration
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

September 16, 1983

Mr. Lyle Lacy
City Manager
City of Oak Ridge
P. O. Box 1
Oak Ridge, Tennessee 37830

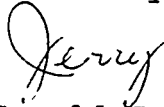
Dear Mr. ^{Lyle}Lacy:

As per our recent discussions, we are requesting that you and other members of your staff, or agency, as you deem appropriate, attend a meeting in Oak Ridge, Tennessee, on October 11, 1983. It is to be held at the Department of Energy (DOE) building, beginning at 1:00 pm eastern time.

Persons representing DOE, EPA, CDC, the City of Oak Ridge and the Tennessee Department of Health and Environment are to be in attendance. The purposes of the meeting include discussion of our "acceptable guidance level" for mercury in soil, its potential impact, and other topics as may be appropriate. A tour of the Y-12 facility and East Fork Poplar Creek area is being planned for October 12, 1983.

Should you have any questions or desire assistance on travel arrangements and motel reservations, please contact us. We appreciate your working with us and your attendance at this meeting.

Sincerely,


Gerald E. Ingram, Director
Environmental Epidemiology

GEI:mp



TENNESSEE DEPARTMENT OF PUBLIC HEALTH
Environmental Management and Quality Assurance Administration
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

September 16, 1983

Mr. Chuck Pietrosewicz
Public Health Advisor-Superfund Activity
EPA - Region 4
Emergency & Remedial Response Branch
345 Courtland St., N.E.
Atlanta, Georgia 30365

Dear Mr. ^{Chuck}Pietrosewicz:

As per our recent discussions, we are requesting that you and other members of your staff, or agency, as you deem appropriate, attend a meeting in Oak Ridge, Tennessee, on October 11, 1983. It is to be held at the Department of Energy (DOE) building, beginning at 1:00 pm eastern time.

Persons representing DOE, EPA, CDC, the City of Oak Ridge and the Tennessee Department of Health and Environment are to be in attendance. The purposes of the meeting include discussion of our "acceptable guidance level" for mercury in soil, its potential impact, and other topics as may be appropriate. A tour of the Y-12 facility and East Fork Poplar Creek area is being planned for October 12, 1983.

Should you have any questions or desire assistance on travel arrangements and motel reservations, please contact us. We appreciate your working with us and your attendance at this meeting.

Sincerely,

Gerald E. Ingram, Director
Environmental Epidemiology

GEI:mp



TENNESSEE DEPARTMENT OF PUBLIC HEALTH
Environmental Management and Quality Assurance Administration
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

September 16, 1983

Dr. Henry Falk
Special Studies Branch
Center for Environmental Health
CDC - 1600 Clifton Road, N.E.
Atlanta, Georgia 30333

Dear Dr. ^{Henry}Falk:

As per our recent discussions, we are requesting that you and other members of your staff, or agency, as you deem appropriate, attend a meeting in Oak Ridge, Tennessee, on October 11, 1983. It is to be held at the Department of Energy (DOE) building, beginning at 1:00 pm eastern time.

Persons representing DOE, EPA, CDC, the City of Oak Ridge and the Tennessee Department of Health and Environment are to be in attendance. The purposes of the meeting include discussion of our "acceptable guidance level" for mercury in soil, its potential impact, and other topics as may be appropriate. A tour of the Y-12 facility and East Fork Poplar Creek area is being planned for October 12, 1983.

Should you have any questions or desire assistance on travel arrangements and motel reservations, please contact us. We appreciate your working with us and your attendance at this meeting.

Sincerely,

Gerald E. Ingram, Director
Environmental Epidemiology

GEI:mp



TENNESSEE DEPARTMENT OF PUBLIC HEALTH
Environmental Management and Quality Assurance Administration
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

September 16, 1983

Mr. Dick Egli
U. S. Department of Energy
Oak Ridge Operations Office
P. O. Box E
Oak Ridge, Tennessee 37830

Dear Mr. ^{Dick}Egli:

We appreciate your working with us in making arrangements for the forthcoming meeting at your facilities in Oak Ridge on October 11, beginning at 1:00 pm eastern time.

Persons representing DOE, EPA, CDC, the City of Oak Ridge and the Tennessee Department of Health and Environment are to be in attendance. The purposes of the meeting include discussion of our "acceptable guidance level" for mercury in soil, its potential impact, and other topics as may be appropriate. A tour of the Y-12 facility and East Fork Poplar Creek area is scheduled for October 12, 1983.

Again, we wish to express our sincere appreciation for your assistance in this matter.

Sincerely,

Gerald E. Ingram, Director
Environmental Epidemiology

GEI:mp



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

December 19, 1983

Mr. Paul White
202 Bennett
Oak Ridge, Tennessee 37830

Dear Mr. White:

The following soil samples were collected and analyzed for Mercury by the Oak Ridge Associated Universities (ORAU) for the Department of Energy (DOE). The results furnished by DOE to our Department for evaluation were:

<u>Location</u>	<u>Sample Number</u>	<u>Date Collected</u>	<u>Results (PPM)</u>
Yard	83-0246	7/11/83	.066
Garden	83-0247	"	.02
"	83-0248	"	.046

The guideline level for mercury in soil of twelve parts per million (12 ppm) to protect human health was developed by our staff due to the absence of a national standard. Based on the above results being compared with this level, there would be no adverse human health effects expected.

Please feel free to contact Mr. Pat Turri of the Environmental Epidemiology Unit if further clarification of these results is necessary. He can be reached at (615) 741-5683 or Tennessee Department of Health and Environment, TERRA Bldg., 150 9th Avenue, North, Nashville, Tennessee 37203.

Sincerely,

Gerald E. Ingram
Director
Environmental Epidemiology

GEI/CC/sh EEP-1

CITY OF OAK RIDGE



615/483-5671 • POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37830
January 3, 1984

Mr. Patrick A. Turri
Environmental Engineer
Environmental Epidemiology
Tennessee Department of Public Health
4th Floor, ERTTA Building
150 Ninth Avenue, North
Nashville, Tennessee 37203

Dear Pat:

I appreciate the telephone contact today, and your expressed willingness to take a look at potential short-term health hazard soil levels, using a somewhat similar approach as for the 12 ppm guideline, but considering primarily a range of 6 to 18 months or no more than 18 to 30 months as a part of this potential short-term toxic material exposure review initiated locally and approved by City Council December 19, 1983.

We also appreciate your initial visits and the early December visit by Gerald E. Ingram of your division, for a first-hand look at some additional sites reported to be above 12 ppm mercury. We will continue to rely on the expertise, assistance, and input from your section for overall Task Force use, Interim Action Study, and for day-to-day assistance on questions, problems, citizen notification, etc. As I indicated, this municipal office will assume that your office will notify citizens when reported sample results are below existing guidelines, until such time as you coordinate other arrangements for notification by DOE/ORAU, another State office, or others. It may be that citizens would have more confidence in notifications from the Tennessee Division of Public Health Epidemiology than DOE or ORAU communications. Therefore, I would suggest that your division continue in the public notification role unless other equally satisfactory arrangements can be made.

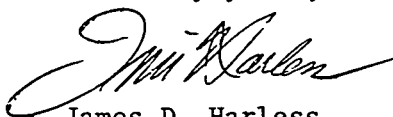
We are glad to know that citizen lab soil sample results for reports at or below 12 ppm have been mailed as planned, and that your office will also proceed to provide written notification for citizens regarding test results for vegetables below existing applicable guidelines/standards for vegetable consumption. The November 1983 Task Force conceptual work plan states that "State officials notify the property owner of the results."

Regarding your comment about possible biological samples from a limited list of local individuals who may have been more likely to be exposed to some significant levels of mercury, I personally feel that such analysis should be helpful as documentation for any more detailed human study consideration and/or to demonstrate that in spite of the degree of mercury presence in soil, etc., current human biological levels of mercury do not appear to be a problem. It is my feeling that biological mercury levels known to cause health problems would not be found, but I would certainly like to know about it if such levels were present.

Finally, enclosed please find the November Oak Ridge Task Force conceptual work plans, including the off-site plan with Mr. Barry Sulkin as Chairman.

If we can provide other information, please advise. We look forward to hearing from you regarding potential short-term soil exposure evaluation and/or interim action options, criteria, or soil level guidelines.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Jim Harless".

James D. Harless
Code Enforcement Office

fmf

Enclosures

cc: M. Lyle Lacy
Lowell Strunk
File



TENNESSEE DEPARTMENT OF PUBLIC HEALTH
Environmental Management and Quality Assurance Administration
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

January 6, 1984

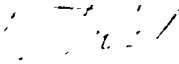
Mr. Lyle Lacy
City Manager
City of Oak Ridge
P.O. Box 1
Oak Ridge, TN 37830

Dear Lyle:

The State of Tennessee has responded by letter to forty-four citizens of Oak Ridge regarding their mercury soil samples. These forty-four persons have been notified of each soil sample result registering less than 12 ppm of mercury only. Attached is a list of those notified and a copy of the letter's format. This set of letters takes us from Sample No. 1 to 1134 regarding what we consider to be safe levels of mercury in the soil. The results registering higher than 12 ppm mercury will be responded to at a later date along with other types of samples (i.e. vegetable, hair, etc.)

If you have any questions please give me a call.

Sincerely,


Patrick A. Turri
Environmental Epidemiology

FAT/pls



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

January 24, 1984

Mr. Clayton Gist
ORAU
Professional Training Program
Dale Ridge, TN 37831-0117

Dear Clayton,

As discussed with you on Monday, January 19, 1984, I am requesting that we begin to receive the names and mailing addresses for persons requesting soil analysis. This will help to expedite our response to persons as results are provided to us from you through DOE. It would be helpful if we could be provided this same information on those analysis which we have already received. This is necessary only where the address provided is different from the mailing address. Whatever help you can provide will be appreciated.

Sincerely,

Patrick A. Turri
Environmental Engineer

PAT/pls



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

February 14, 1984

Mr. Wayne Hibbitts
Office of the Assistant Manager
for Safety and Environment
Department of Energy
Oak Ridge Operations
P.O. Box E
Oak Ridge, TN 37831

Dear Wayne,

I am enclosing a report sent to us by CDC. The report is entitled "Suggested Areas for Environmental Sampling, Oak Ridge, TN." Suggestions have been made by Dr. Diane Rowley and Mr. Bob Kay of CDC for additional soil, water, and fish analysis. You and I had discussed previously the need to sample soil at other areas along East Fork Poplar Creek in conjunction with the pre-survey. They would appreciate your comments on this additional sampling. I have sent a copy of this report to Jim Harless and David McKinney for their consideration and action.

As I read the report, the soil samples in item 7a - 7m would be most necessary for success of the pre-survey. Is it possible for any or all of these to be accomplished before May, 1984?

Wayne, I am also interested in having you participate in responding to our pre-testing of the questionnaire. I need to interview four or five persons from Oak Ridge. If you would agree please let me know and we will set something up for the end of February. I will try to keep you advised of our progress in the pre-survey.

Sincerely,

Patrick A. Turri
Environmental Engineer

PAT/pls

OFFICE CORRESPONDENCE

SUBJECT: CDC Report "Suggested Areas for Environmental Sampling,
Oak Ridge, TN"

FROM	TO	DATE
EEP	KBO	2/14

Attached is a copy of a report sent to us by Dr. Rowley of CDC. She and Bob Kay are recommending areas of additional soil, fish and water sampling. I thought that this should be brought to the attention of the task force for their consideration. We will be sending a copy to Wayne Hibbitts for his information and to request that soil samples be collected in the areas designated. Dr. Rowley felt these areas should be evaluated in conjunction with the pre-survey. She would also appreciate any comments on the report that you or staff or members of the task force would care to make.

We are beginning to bring everything together for the pre-survey and we are currently on schedule. I will keep you apprised of our progress. If you need additional information, let me know.

[illegible]

CITY OF OAK RIDGE



615 / 483-5671 • POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37830

February 14, 1984

Mr. Pat Turri
Environmental Epidemiology
Tennessee Dept. of Public Health
4th Floor TERRA Building
150 Ninth Avenue, North
Nashville, Tennessee 37203

Dear Mr. Turri:

Subject: Mr. Larry Wyrick
143 Beverly Circle
Oak Ridge, Tenn. 37830
Home: 615-483-6290
Work: 615-574-6695

When he was growing up, they lived in Woodland. He and a friend sometimes went to swim/wade in E. Fork Poplar Creek across from Woodland. Although he is 45 years old now, he wondered if tests might be helpful, and had his wife Judy to call with this information.

I advised Mr. s Wyrick that the Tennessee Department Public Health may want more recent exposure or those living or playing on soil of the Creek flood plain. In any case, I indicated that I would take the name and telephone and foward to you.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. D. Harless", is written over a horizontal line.

James D. Harless
Code Enforcement
Health/Safety Coordinator
City of Oak Ridge

rp



OK.
com. file

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

March 19, 1984

Mr. Paul White
101 Bennett Lane
Oak Ridge, TN 37830

Dear Mr. White,

It was a pleasure meeting with all of you last week and I hope I was able to share with you the types of information which would be helpful toward understanding the planned health survey. Mary Johnston, an attorney with our office, passed along a name whom she felt might be helpful in letting you know more about any planned occupational studies that the National Institute for Occupational Safety & Health (NIOSH) is planning. The gentleman's name and address and phone are: Doug Gamble, TN COSH, Broadway Ave., Knoxville, TN (615) 525-5090. You may want to contact him.

Also I am sending another copy of the letters addressing results of soil samples taken from your property. As you recall, I indicated that these were sent to the wrong street address. Please review them and if you have any questions let me know.

I look forward to working with your community in the assessment of potential environmental problems.

Sincerely,

Patrick A. Turri
Environmental Engineer

PAT/pls



TENNESSEE DEPARTMENT OF PUBLIC HEALTH
Environmental Management and Quality Assurance Administration
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

March 19, 1984

Mr. Paul White
101 Bennett
Oak Ridge, Tennessee 37830

Dear Mr. White:

The following soil samples were collected and analyzed for Mercury by the Oak Ridge Associated Universities (ORAU) for the Department of Energy (DOE). The results furnished by DOE to our Department for evaluation were:

<u>Location</u>	<u>Sample Number</u>	<u>Date Collected</u>	<u>Results (PPM)</u>
202 Bennett	83-0246	7/11/83	0.066
202 Bennett	83-0247	7/11/83	0.020
202 Bennett	83-0248	7/11/83	0.046

The guideline level for mercury in soil of twelve parts per million (12 ppm) to protect human health was developed by our staff due to the absence of a national standard. Based on the above results being compared with this level, there would be no adverse human health effects expected.

Please feel free to contact Mr. Pat Turri of the Environmental Epidemiology Unit if further clarification of these results is necessary. He can be reached at (615) 741-5683 or Tennessee Department of Health and Environment, TERRA Bldg., 150 9th Avenue, North, Nashville, Tennessee 37203.

Sincerely,

Patrick A. Turri
Environmental Engineer
Environmental Epidemiology

PAT/slk EEP-1



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

April 10, 1984

Mr. Wayne Hibbits
Department of Energy
Oak Ridge Operations
P.O. Box E
Oak Ridge, TN 37831

Dear Mr. Hibbits:

This letter is to confirm our position which was expressed by telephone to you on the Interim Action Group's recommendations regarding levels of mercury in soil at the Civic Center, Alvin K. Bissell Park, and certain areas along the Oak Ridge Turnpike in Oak Ridge, Tennessee. After reviewing the furnished data and information and consulting with CDC, we jointly concur with the Group's recommendations for contaminated soil removal with possible restriction of access to the areas until such can be effected.

We have four additional requests:

1. That a Quality Assurance/Quality Control (QA/QC) assessment of your contract for laboratory services be performed by the Environmental Protection Agency (EPA);
2. That consideration be given to characterizing the other parameters in the soils before designating them as "acceptable" with specific attention being focused on levels of cadmium;
3. That attention be given toward minimizing worker exposure to dusts and vapors, OSHA and TOSHA standards and the prevention of dusts from becoming airborne during the removal process; and,
4. That equipment used for removal and transport of the contaminated soils be "decontaminated" prior to further use.

All work and procedures should be approved and coordinated through Wayne with our Division of Solid Waste Management. We would appreciate receiving your proposed work plan with attention being given to the above mentioned items.

Sincerely,

Gerald E. Ingram, Director
Environmental Epidemiology

GEI/pls



*Ho - Oak Ridge
O.R.
Correspondence,
Letter F.*

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

September 27, 1984

Mr. Wayne Hibbitts
Department of Energy
Oak Ridge Operations
P. O. Box E
Oak Ridge, Tennessee 37831

Dear Wayne:

It has been some time since we discussed your need to be kept briefed on the status of the Mercury Study. After much deliberation between ourselves and CDC we have projected a timetable and a final report completion date of April 1, 1985. A copy of this timetable is enclosed. Any comments or suggestions you might have, are welcomed. I am optimistic that our completion date is more realistic considering the probable level of Federal Agency Review.

Please note that our target completion for urine and hair analysis is now mid-October. By November 1, 1984, all persons who were sampled will be notified and advised of any seriously high mercury body burdens.

Use this timetable, as you wish, in your communications to other DOE officials. You might refer any inquiries by others to Carol A. Cothron or myself if there is a need for clarifications. I hope to see you November 1 at the ORT meeting. I can bring all of you up to date then.

Sincerely,

Patrick A. Turri, Director
Environmental Epidemiology

PAT:mg

Enclosure

TIMETABLE FOR
OAK RIDGE MERCURY STUDY

- 1) Design Study (Jan-May)
- 2) Administer Questionnaire (Jun)
- 3) Collect Biological Samples (Jul)
- 4) Key all Questionnaires of sampled persons (Jul-Sep)
- 5) Key all Questionnaires of non-sampled persons (Oct-Nov)
- 6) Begin writing Report (Oct)
- 7) Proofing of keyed Questionnaire Data (Aug-Sep)
- 8) Urine Analysis (Jul-Oct)
- 9) Hair Analysis (Jul-Oct)
- 10) Notify persons sampled of Urine results (Nov)
- 11) Notify persons sampled of Hair results (Nov)
- 12) Analysis of Urine data (Nov-Jan)
- 13) Analysis of Hair data (Nov-Jan)
- 14) First Rough Draft of Report of Findings (Feb)
- 15) Second Rough Draft of Report of Findings (Mar)
- 16) Publish Final Report (Apr)

1984		1985
J F M A M J	J A S O N D	J F M A
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J F M A M J	J A S O N D	J F M A
1984		1985

Oak Ridge



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

November 8, 1984

Dr. Diane Rowley
Centers for Disease Control
Center for Environment Health
C-9
1600 Clifton Road
Atlanta, GA 30333

Dear Diane:

When I was in Atlanta, we discussed the progress being made on the urine and hair specimens collected in the Oak Ridge community. At that time the urine results were very near completion. The status of the hair samples on the other hand were very uncertain. As reflected in our timetable, the sample results need to be communicated to the citizen participants by the end of November. I do not want to delay transmitting the urine results past November. Could you contact the laboratory and make certain we can reach our milestones?

I have received the three boxes of questionnaires that you have sent. I have not looked through the boxes in detail, but were the instructions for our additional coding included? Also, are the tapes and floppy disk on their way?

Thanks for all of your help on this project.

Sincerely,

Patrick A Turri
Director
Environmental Epidemiology

PAT/jlk

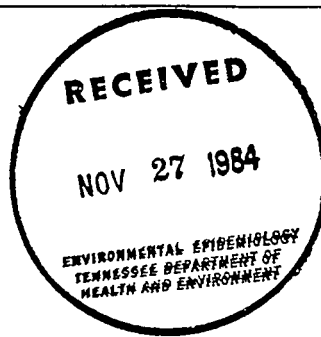


DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333

November 20, 1984



Patrick Turri
Director of Environmental Epidemiology
Tennessee Department of Health and Environment
150 Ninth Avenue, North
Nashville, Tennessee 37203

Dear Pat:

I have reviewed the detailed information on mercury levels in Oak Ridge turtles. Mercury levels found in two of eight turtle liver specimens exceed the FDA Action Level of 1 ppm recommended for the edible portion of aquatic organisms. A third specimen had a liver mercury level of 0.91 ppm. The highest level in muscle was 0.3 ppm. Muscle is used in turtle recipes, but I have no information on the consumption of turtle liver. I think it would be useful to advise residents of Oak Ridge of the mercury levels found in turtles and that consumption of turtle muscle probably does not represent a significant health risk, but consumption of other turtle organs may pose a risk to human health.

Sincerely yours,

Diane Rowley
Diane Rowley, M.D.

*Discussed with Wayne Hibbatts (DOE) will
publish in his next monthly report.*



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

December 14, 1984

Dr. Eric J. Sampson
Assistant to the Director
for Environmental Health Studies
Clinical Chemistry Division
Chambllee Building 17
Room 1103
Centers for Disease Control
Atlanta, GA 30333

Dear Dr. Sampson:

I wanted to follow-up our telephone conversation of December 12, 1984. After discussion with staff in the Special Studies Section, I feel that some other arrangement needs to be made relative to the analysis of human hair. A January 31, 1985, completion date is unsatisfactory and will pose an undue hardship to the timely completion of this study. This is the second delay that has been imposed since we first formulated plans for this pre-study. Although I understand the problems that have arisen, I do not think enough attention is being afforded this project. Communicating to the press and the participating individuals why results are not available after five months is quite disconcerting. Urine results were all below 24 ug/l, but these results are important to the participants because they do allay fear of ill-health.

I therefore, request that a report of results be provided by December 31, 1984. Please let me know what can be arranged.

Sincerely,

Patrick A. Turri
Director
Environmental Epidemiology

PAT/jlk

cc: Dr. David Bayse
Dr. Diane Rowley



TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE, NORTH
NASHVILLE, TENNESSEE 37203

December 19, 1984

Mr. Mike Walker
City of Oak Ridge
P. O. Box 1
Oak Ridge, TN 37831

Dear Mike:

I am following up our discussion of several weeks ago concerning a clarification of the terminology used to describe the "reference range" in our letters to your employees about mercury in urine. As stated to you, all individuals have some trace of mercury in their body. The range of 20-25 ug/l is the range of urine mercurys that was published in Fribery and Vostal Mercury in the Environment. An epidemiological and toxicological appraisal, CRC Press, 1972 and Goldwater, L.J. WHO Chronicle 21:191; 1967. This range reflects values that were found in persons with no known environmental mercury exposure. The levels that were found in your employees would not be expected to cause any ill-health.

I have also attached a summary sheet that was prepared early in our soil investigations. You might find this helpful to distribute to your employees.

Please let me know if you still require further explanation.

Sincerely,

Patrick A. Turri
Director
Environmental Epidemiology

PAT/jlk

Enclosure

Tennessee Department of Health and Environment
Environmental Epidemiology
Chemical Health Effects Summary Sheets (CHESS) (October 1, 1983)

MERCURY

The information in this CHESS is intended to provide a summary of the physical, chemical and health effects properties of mercury. It should assist the general public in understanding the toxicity of this compound and the current knowledge relative to the risk of its presence in the environment.

Chemical Name: Mercury; Quicksilver; occurs inorganically as Mercurous and Mercuric compounds, and organically as Alkyl (i.e. Mercurous Chloride; Monomethyl Mercury)

Chemical Abstract Service Number: Hg⁰ 7439-97-6

Use

Mercury is used in the chlor-alkali industry and in electrical apparatus. Inorganic and organic mercuries used as fungicides, herbicides and as preservatives.

Physical Properties (1)(3)(4)

Molecular Weight: 200.61

Formula: Hg⁰; Hg⁺; Hg⁺⁺

Appearance: Metallic mercury is silver-white

Stability: In water elemental mercury is transformed biologically to organic mercury (methyl mercury). This is taken up by fish and bioaccumulated. Elemental mercury is also vaporized to the atmosphere where it returns to the earth in rainfall. In soil, mercury is tightly bound but may become released when methylated by bacterial action.

Health Effects Information: (2)(3)(4)

Human Acute: Ingestion of inorganic mercury compounds causes metallic taste, abdominal pain, nausea, diarrhea, & excessive salivation. Kidney damage and death result from very large doses. Organic mercury compounds cause constriction of visual field, tremors, and other central nervous system effects, chills and pneumonitis. Ingestion of elemental mercury produces little effect.

Human Chronic: Inhalation results in inflammation of gums, irritability, tremors and excessive salivation. With organic and elemental mercury, central nervous system effects are expected. Inorganic mercury compounds result in kidney dysfunction on ingestion. No carcinogenic, mutagenic or teratogenic effects have been noted in humans. Ingestion of fish is the largest single source of mercury to humans.

Animal Health Effects: Signs and symptoms as described above are expected. Bioaccumulation occurs in aquatic life with retention of 1-3 years.

Suggested Dose Response Levels or Standard

<u>Dose/Concentration</u>	<u>Response/Standard</u>
0.20 ug/l for 24-hours	EPA Water Quality Criteria to protect freshwater aquatic life. (1)
4.1 ug/l	Maximum concentrations recommended by EPA Water Quality Criteria for protection of freshwater aquatic life. (1)
0.146 ug/l	EPA Water Quality Criteria to protect human health from ingestion of aquatic life. (1)
0.05 ug/l	Tennessee Current Water Quality Criteria for protection of humans from consumption of aquatic life.
2.0 ug/l	Tennessee Interim Primary Drinking Water Standard.
0.2 ug/l	Tennessee Regulations 1200-4-3: Surface Water Criteria for water classified as suitable for Domestic Water Supply.
1.0 ppm (ug/g)	Food and Drug Administration action level in edible fish. (5)
100 ug/m ³ in 8-hours	Occupational Safety and Health Administration standard for workplace inhalation exposure. (3)
28 mg/m ³	Immediately dangerous to life or health by inhalation. (3)
5-10 ug/day	Natural human intake.
1429 mg/kg	Human lethal dose. (1)
1.2 - 8.5 mg/m ³	Human acute toxicity by inhalation. (1)
0.2 ug/l in 6 weeks	Lethal to fathead minnows. (1)

References

1. EPA; Multimedia Environmental Goals for Environmental Assessment; EPA-600/7-77-136b; 1977
2. Casarett, et. al.; Casarett and Doull's Toxicology; 2nd Edition, 1980; MacMillan
3. NIOSH; Criteria for a Recommended Standard for Inorganic Mercury; Publication #73-11024; 1973
4. EPA; Ambient Water Quality Criteria for Mercury; EPA 440/5-80-058; 1980
5. FDA; Action Levels for Poisonous or Deleterious Substances in Human and Animal Feed; 1979

October 23, 1985

Medical Epidemiologist DEHAB

Reported mercury poisoning in a former resident of Oak Ridge, Tennessee

The Record

On September 12, 1985 I received a call from George Phelps. Mr. Phelps resided in Oak Ridge, Tennessee for three years. He moved to Marietta, Georgia in May 1983. He was recently seen by William Douglas M.D. of 2470 Windy Hill Road (953-0710) because of complaints of memory loss and personality changes.

Dr. Douglas performed an "electronic scan" that diagnosed mercury poisoning. I expressed concern over this choice of diagnostic technique, discussed the laboratory method used by CDC in the pilot survey of mercury exposure in Oak Ridge and suggested that a second opinion might be helpful.

Dr. Phelps called me back on October 16 to report that his local M.D. took a hair sample for analysis and began chelation therapy. In the meantime the other members of his family had been screened for mercury, and his 14 year old son was diagnosed as having mercury poisoning along with adrenal gland and pituitary gland damage.

I have informed Mr. Sara Bells of the Tennessee Department of Health and Environment of Dr. Phelps' complaints. I have also notified Tom McKinney, M.P.H. Environmental Epidemiologist Georgia Department of Human Resources and the Cobb County Health Department. I have discussed the case with the State Medical Board. My concern is that this family may be receiving treatment for an inadequately diagnosed environmental illness. However, I do not think further involvement by CDC is appropriate at this time.

Glenn Kowley

c.c. John Andrews, M.D.
Mary Mortensen, M.D.
Tom McKinney, M.P.H.
Sara Bells, M.D. ✓



OFFICE CORRESPONDENCE

TO: Thomas Maxson



SUBJECT: Disposal of Oak Ridge Urine Specimens

FROM	TO	DATE
EEP	LAB	11/3/8
	TM	

As we discussed by phone, we have decided that there is no desire to analyze nor retain the urine specimens which were collected during the Oak Ridge Mercury Study. Please consider this your permission to dispose of them by what ever procedure is appropriate. Thanks again for the help you and your staff were in investigating the analysis of these samples for uranium.

PAT/btm

FROM	DATE

10

[illegible]

November 29, 1985

Mr. M. Lyle Lacy, III
City Manager
P.O. Box 1
Oak Ridge, Tennessee 37831-0001

Dear Mr. Lacy:

We are glad that you were pleased with the report of the "Pilot Survey of Mercury Levels in Oak Ridge, Tennessee."

You must be reminded that there was a recommendation to continue the fish ban on East Fork Poplar Creek until the final report from the fisheries studies is completed by the Oak Ridge Task Force. Those results along with continued monitoring of the creek water and sediment will be required before lifting of the present ban can be considered.

It is inappropriate, at present, to develop the "action plan" or "time table" as you requested.

We appreciate your wishes to remove any stigmata of possible human health threats associated with East Fork Poplar Creek. It is our hope to do so at the earliest time after we are assured that the available information justifies such action; however until the results can be carefully considered, the decision must be held in abeyance.

Your efforts on behalf of Oak Ridge are applauded. The people of that community are a great asset to our state. It is our wish to serve them to the best of our ability, too.

Best wishes to you.

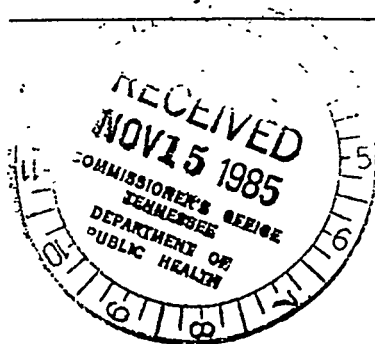
Sincerely yours,

Michael T. Bruner, Dr. P.H.
Assistant Commissioner, TDHE

MTB/vm

OAK RIDGE OR TENNESSEE

CITY OF OAK RIDGE
MUNICIPAL BUILDING
POST OFFICE BOX 1 37831-0001
TELEPHONE: (615) 483-5671



November 14, 1985



*DKS 11/18
MTB - Pls.
Major
Response
Thanks,
wfb*

James E. Word, Commissioner
Tennessee Department of Health
and Environment
Cordell Hull Building
Nashville, Tennessee 37219-5402

Dear Commissioner Word:

I want to thank you for the November 12, 1985 Mercury Health Studies Briefing presented to the City's Environmental Quality Advisory Board by your department's personnel. We are extremely pleased that the study showed no increased health risks to Oak Ridge residents due to mercury contamination in the soil.

In light of these findings, the City is extremely anxious to remove any stigma in the public's mind of possible human health threats associated with the East Fork Poplar Creek; specifically, it is our desire to expedite the removal of warning signs posted by the State along the creek.

It is our sincere belief that technical and scientific reasons should be used as the basis for sign removal. Since the original posting of signs, DOE has significantly upgraded the wastewater treatments facilities at the Y-12 plant which have improved the discharges into the creek. In addition, several related studies on human exposures and possible uptakes into the body of mercury and other potential contaminants will be completed shortly.

In light of the new data in hand or to be generated shortly, and the facility improvements at the Y-12 plant, we request that the State develop as soon as possible an action plan for removal of the posted signs and a timetable for implementation.

If you have any questions on this matter, please call at (615) 483-5671.

Sincerely,

M. Lyle Lacy, II
M. Lyle Lacy, II
City Manager

cc: Mayor and Members of City Council
Environmental Quality Advisory Board



DEPARTMENT OF HEALTH & HUMAN SERVICES

CO: Anderson, Oak
Public Health Service Ridge M

Centers for Disease Control

February 8, 1988

Robert V. Taylor, D.V.M.
Environmental Epidemiologist
Tennessee Department of Health & Environment
100 9th Avenue North, 5th Floor
Nashville, Tennessee 37219-5405

Dear Dr. Taylor:

With this letter is enclosed for your information a letter to the Centers for Disease Control from an Oak Ridge, Tennessee resident concerned about the occurrence of two cases of childhood leukemia among former classmates of her daughter and my own reply.

Sincerely yours,

Matthew Zack

Matthew Zack, M.D., M.P.H.
Medical Epidemiologist
Epidemiologic Studies Section
Epidemiology and Surveillance Branch
Division of Chronic Disease Control
Center for Environmental Health
and Injury Control

Enclosures

108 Norton Road
Oak Ridge TN 37830
January 26, 1988

Centers for Disease Control
1600 Clifton Road NE
Atlanta, GA

Gentlemen:

I am writing to request your assistance in providing some statistical information, and, hopefully, peace of mind about a problem which has occurred among former classmates of my 9th grade daughter, Elizabeth. She attended Cedar Hill Elementary School for grades K-6, and was part of a relatively small class that began with about 75 students and ended with about 50 students. During that time (grades K-6), I doubt that the total number of students, including those who moved in and out of the school district, numbered more than 100 children.

In February 1986, a former classmate, Penny Dingus, died after a bone marrow transplant for treatment of leukemia. In December 1987, another former classmate, Angela Rae, died in Knoxville, also of leukemia. Needless to say, this has been very upsetting for the former friends of these girls and very dismaying for the parents.

Penny and Angela did not attend my daughter's school at the same time. However they each attended the school for several years, each also attended Willow Brook Elementary here in Oak Ridge, and each lived in the same neighborhood of about 1/4 mile from school.

I inquired of the school system if there had been any further health problems of this nature among the remaining children of my daughter's elementary school class. While the school administration here is really very cooperative, I have not received an answer of any kind to my inquiry.

I would greatly appreciate your providing me with any statistical information you may have which would show the expected leukemia incidence for a group similar to my daughter's class. If these deaths are indeed a statistical abnormality, I would appreciate knowing it.

Thank you for your assistance.

Sincerely yours,
Marilyn A. Hosker
Marilyn A. Hosker
(Mrs. R. F. Hosker)



February 8, 1988

Mrs. Marilyn A. Hosker
108 Norton Road
Oak Ridge, Tennessee 37830

Dear Mrs. Hosker:

This is in reply to your letter of January 26 asking about "the expected leukemia incidence for a group . . . [of 100 children] . . . similar to [your] daughter's class", in which two former classmates of your daughter had died of leukemia.

Because it is unclear from your letter when these two children first were diagnosed with (in contrast to dying from) leukemia, I will give you two possible estimates of the expected number of newly diagnosed leukemia cases with their associated probabilities of observing two or more such cases. The first of these estimates assumes that they had been diagnosed only after they began going to school (say, from age 5 through age 14), and the second assumes that they had been diagnosed only sometime after birth through age 14.

Both of these estimates assume the following:

- 1) the group of children who could have been classmates of your daughter totals 100 children;
- 2) the rates of developing childhood leukemia in Oak Ridge resemble those from 1978 through 1981 in the partial national cancer registry program, SEER (the Surveillance, Epidemiology, and End Results program sponsored by the National Cancer Institute); and
- 3) the observed number of leukemia cases follows a special statistical distribution (the Poisson distribution), which makes it possible to calculate the probability of observing two or more leukemia cases, given a specific expected number of cases (the expected number of cases is calculated by multiplying the leukemia rates times the number of children at risk (=100) times the number of years these children were at risk).

The expected number of newly diagnosed leukemia cases and the probability of observing two or more such cases, assuming a specific expected number, are the following:

<u>SITUATION</u>	<u>EXPECTED NUMBER</u>	<u>PROBABILITY</u>
Diagnosed after starting school	0.027 cases	0.00036 (3.6 in 10,000)
Diagnosed after birth	0.059 cases	0.00165 (16.5 in 10,000)

Although these estimated expected numbers and their corresponding probabilities are very small, they must be put in perspective. Assuming, for example, that the two cases were diagnosed only after the children started school, the 0.027 cases expected imply an increased risk of 74 times ($=2.00/0.027$) that expected. However, an estimated 16 million children aged 5 through 9 were living in the United States in 1983, or about 160,000 groups (16,000,000/100) of 100 children each. The probability of 3.6 in 10,000 (for observing two children with leukemia, given 0.027 expected cases) means that about 58 groups of 100 children ($=160,000 \text{ times } 0.00036$) out of the 160,000 such groups might have two cases of childhood leukemia. From this perspective, the two cases seen among your daughter's classmates, though uncommon, might have occurred in about 57 other groups of 100 children in the United States; you have been the only one so far to write the Centers for Disease Control about this situation.

Although physicians and researchers have been studying childhood leukemia for decades, we still do not know its causes. It usually occurs more often in boys than girls, in whites than nonwhites, and in those with higher socioeconomic status than those with lower socioeconomic status. In some studies, children of mothers who had received diagnostic X-rays for problems during pregnancy had a higher risk of developing leukemia than other children; children who were heavier at birth also seem to be at higher risk. A recent study, which needs further confirmation, suggested that children exposed to low intensity magnetic fields from certain configurations of power lines have a higher risk of leukemia than children not so exposed.

You, other parents, and former friends of the two affected children need not be concerned that contact with them has increased the risk of developing leukemia. Although leukemia does cause symptoms (for example, fever, chills, swollen lymph glands) that resemble infections, and although viruses do cause leukemia in animals, childhood leukemia is not believed to be an infectious disease and is certainly not contagious (easily spread from one person to another) because it is so rare.

With this letter, I am enclosing some information about childhood leukemia. I am also sending (for his information) copies of your letter and this one to the State Environmental Epidemiologist, Robert V. Taylor, D.V.M. (phone 615/741-5683), at the Tennessee Department of Health and Environment in Nashville. If you have any further questions, please write or call me at 404/488-4380.

Sincerely yours,

Matthew Zack, M.D., M.P.H.
Medical Epidemiologist
Epidemiologic Studies Section
Epidemiology and Surveillance Branch
Division of Chronic Disease Control
Center for Environmental Health
and Injury Control

Enclosures



EEP/Dr. Sell

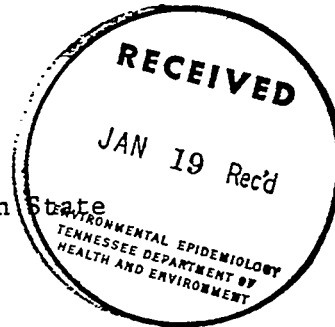
STATE OF TENNESSEE
DEPARTMENT OF HEALTH AND ENVIRONMENT
CORDELL HULL BUILDING
NASHVILLE, TENNESSEE 37219-5402

NED McWHERTER
GOVERNOR

J. W. LUNA
COMMISSIONER

January 16, 1990

Ms. Kristine Gebbie, Chair
Secretarial Panel for the
Evaluation of Epidemiologic
Research Activities
Secretary of Health, Washington State
1000 Independence Avenue, SW
Washington, DC 20585



Dear Ms. Gebbie:

Thank you for your letter of January 3, 1990, to Governor McWherter, inviting the State of Tennessee to participate in a field visit to the Oak Ridge National Laboratories, the Oak Ridge Associated Universities, and the Department of Energy production facilities on January 9 and 10. Unfortunately, we did not receive your invitation until January 9.

The Tennessee Department of Health and Environment, Division of Environmental Epidemiology is very interested in the work of the panel established by the Secretary of Energy, Admiral James Watkins. We will be very interested in any information that you have now and in any future reports. Please send correspondence to Dr. Sarah H. Sell, Director of Environmental Epidemiology, CI-130 Cordell Hull Building, Nashville, Tennessee 37219-5402 (615-741-5683).

Sincerely,

J. W. LUNA
Commissioner

JWL/B5010011/com1

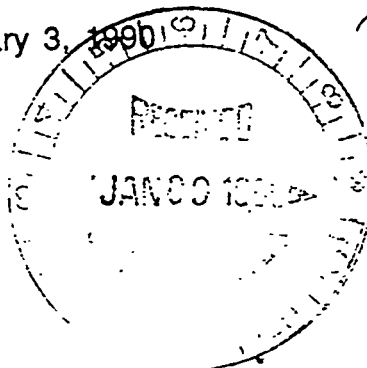
REC'D

HEALTH SERVICES
ADMINISTRATION

**Secretarial Panel for the Evaluation of
Epidemiologic Research Activities**

for the
United States Department of Energy

January 3, 1990



#9
Tracy
send to Mr.
Chambers
he should
reply ✓

The Honorable Ned Ray McWherter
Governor
State Capital
Nashville, Tennessee 37219

Dear Governor McWherter:

The Secretarial Panel for the Evaluation of Epidemiologic Research Activities has been established by the Secretary of Energy, Admiral James Watkins, to conduct an independent review of the appropriateness, effectiveness, and overall quality of the Department's epidemiology programs. His charge to the Panel and its membership list are enclosed.

Some of the Panel's members will be in Tennessee on January 9 and 10 to visit the Oak Ridge National Laboratories, the Oak Ridge Associated Universities Center for Epidemiologic Research, and the Department of Energy's Oak Ridge production facilities.

Recognizing your interest in worker and community health, the Panel would welcome any information you wish to provide them. Steven F. Boedigheimer, the Panel's Executive Director, can arrange for the distribution of information and the participation of a member of your staff in the field visit if you would find that useful. A copy of the agenda is enclosed.

I would be happy to answer any questions you may have about the Panel or its visit. I am available in the State of Washington (206-586-5734), and Steve Boedigheimer in Washington, D.C. (202-586-7304) can also assist.

Sincerely,

Kristine Gebbie, Chair
Secretarial Panel for the
Evaluation of Epidemiologic
Research Activities
Secretary of Health,
Washington State

Enclosures

1000 Independence Avenue, SW
Washington, DC 20585
(202) 586-7304

PSA/RPL
Please draft
response to
TUE on behalf
of the Sec
of Energy, since
too late to
participate
will be too
to send in
cc Jim &
Sharon
DL

SECRETARIAL PANEL FOR THE EVALUATION OF
EPIDEMIOLOGIC RESEARCH ACTIVITIES
OF THE DEPARTMENT OF ENERGY

Committee's Objectives and Scope of Activities and Duties:

The Secretarial Panel for the Evaluation of Epidemiologic Research Activities of the Department of Energy (SPEERA) will provide to the Secretary an independent evaluation of the Department of Energy's (DOE) epidemiology program and the appropriateness, effectiveness, and overall quality of DOE's epidemiologic research activities.

The SPEERA will examine the following aspects of DOE's epidemiologic research activities and recommend measures to the Secretary that will ensure that these activities are appropriate, effective, and represent excellence:

- a. The goals and objectives of the epidemiologic research program (the Program).
- b. The management and reporting structure of the Program.
- c. The full-time-equivalents (FTE's) and budget resources allocated to the Program (both internally to the DOE and externally to contractors).
- d. The use of contract scientists for ongoing and special projects.
- e. The quality control mechanisms in the Program, including data completeness and accuracy, and data management (archiving and access).
- f. The utility and feasibility of transferring the epidemiologic research function, including the necessary data, to another entity.
- g. Maintenance and access to related records such as exposure incident files, materials standards records and facilities design information belonging to the DOE or its contractors.
- h. Current and proposed mechanisms for determining epidemiologic data release policies including controls on "raw" data, "work in progress," and completed analysis.
- i. Current and proposed mechanisms for the storage of DOE epidemiologic data, including the establishment of a comprehensive data repository.
- j. DOE's response to the data related request of the Three Mile Island Public Health Fund.
- k. The long term role of the National Academy of Sciences "Committee on Radiation and Epidemiological Research Programs."
- l. Other areas related to the Program as determined.

Secretarial Panel for the Evaluation of
Epidemiologic Research Activities
of the Department of Energy

KRISTINE GEBBIE, M.N., of Washington, is Chairperson of the Secretary's Panel. She is Secretary of Health, Department of Health, for the State of Washington. In addition, she is an Adjunct Associate Professor at Oregon Health Science University and a member of the Institute of Medicine's AIDS Oversight Committee. She was Administrator of the Oregon Health Division and a member of the Presidential Commission on the Human Immunodeficiency Virus Epidemic. She has been president of the Association of State and Territorial Health Officials.

MOLLY COYE, M.D., of Maryland, is Associate Professor and Head of the Division of Public Health at Johns Hopkins University School of Hygiene and Public Health. She serves on the National Environmental Sciences Advisory Council for the National Institutes of Health and on the AIDS Advisory Committee for the U.S. Public Health Service. She was New Jersey Commissioner of Health and she has served on National Academy of Sciences' committees addressing occupational and environmental health matters. She is the author of numerous publications on occupational health subjects.

MARK CULLEN, M.D., of Connecticut, is Associate Professor of Medicine and Epidemiology at Yale University School of Medicine and Director of the Yale-New Haven Occupational Medicine Program. He is a member of the United Automobile Workers/General Motors Occupational Health Advisory Board and the author of numerous publications on the subject of occupational diseases.

CLARK HEATH, JR., M.D., of Georgia, is Vice President for Epidemiology and Statistics, American Cancer Society. He was Director of South Carolina's Bureau of Preventive Health Services and Director of the Chronic Disease Division of the Bureau of Epidemiology at the Centers for Disease Control. He has served on advisory committees for the World Health Organization, the National Institute for Occupational Safety and Health, and the National Academy of Science.

MARK ROTHSTEIN, J.D., of Texas, is Professor of Law and Director of the Health Law Institute at the University of Houston Law Center. He is on the Board of Advisors of the Southwest Center for Occupational Health and Safety and on the Executive Committee of the Institute for Health Policy Education and Research at the University of Texas Health Science Center. He is the author of numerous publications on medical legal issues and has served on committees for the National Institute of Science and the National Academy of Science. He is an editorial reviewer for the Journal of the American Medical Association and the Journal of Legal Medicine, Trial.

MICHAEL SILVERSTEIN, M.D., of Michigan, is Assistant Director of the Health and Safety Department, United Automobile Workers. He is Adjunct Professor of Occupational Medicine at the University of Michigan School of Public Health. He serves on the Advisory Committee for the New York State Environmental Disease Surveillance Program and is a member of the editorial board for the Journal of Occupational Medicine.

LEE STAUFFER, M.P.H., of Minnesota, is Associate Professor at the School of Public Health at the University of Minnesota and a 1989 recipient of the Public Health Achievement Award from the Minnesota Public Health Association. He was chairman of the Task Force on Safe Drinking Water for Minnesota's Department of Health and Dean of the School of Public Health at the University of Minnesota. He is a Fellow of the American Public Health Association.

THOMAS VERNON, M.D., of Colorado, is Executive Director of the Colorado Department of Health. He is Associate Clinical Professor for the Department of Internal Medicine and Preventive Medicine at the University of Colorado Health Sciences Center. He is past-president of the Association of State and Territorial Health Officials, and he served as Epidemiologist Consultant for the U.S. Agency for International Development and as State Epidemiologist for the Colorado Department of Health.

BAILUS WALKER, JR., Ph.D, M.P.H., of New York, is Professor of Environmental Health and Toxicology at State University of New York at Albany. He was Commissioner of Public Health for Massachusetts and State Director of Public Health for Michigan. He is past-president of the American Public Health Association and a member of the National Academy of Sciences Committee on Enhancing the Practice of Occupational and Environmental Medicine. He is a contributing editor for the New England Journal of Medicine and a member of the Study Group on Cancer Prevention/Control for the National Cancer Institute.

Revised:
12/19/89

DRAFT AGENDA**VISIT BY
SECRETARIAL PANEL FOR THE EVALUATION OF
EPIDEMIOLOGIC RESEARCH ACTIVITIES
OF THE DEPARTMENT OF ENERGY****JANUARY 9-10, 1990****Tuesday, January 9****Garden Plaza Hotel**

8:15 AM Overview of Oak Ridge Operations - Joe La Grone

8:30 AM Overview of Martin Marietta Energy Systems - Clyde Hopkins

8:40 AM MMES Medical Services - Dr. Conrad

9:00 AM Site Epidemiology, Health Physics, Industrial Hygiene Programs

9:35 AM - Y-12 Plant - Dr. Buck Jones
- ORGDP - TBD

10:10 AM BREAK

10:25 AM - ORNL - Dr. Seaton Garrett

11:00 AM Labor/Union Safety Representatives Meeting

11:30 AM Environmental Advisory Committee

NOON Lunch at Y-12 Cafeteria

Plant Tours

1:15 PM Y-12 Plant
- Building 9212

2:45 PM ORNL
- Tour Medical Sciences Division
- Isotopes Area Hot Cells

4:00 PM ORGDP
- Centrifuge Buildings
- Health Effects Related to Gas Centrifuge Program Workers

5:30 PM Return to Hotel

Wednesday, January 10

Center for Epidemiologic Research (CER)
Oak Ridge Associated Universities
Pollard Auditorium

- 8:00 Introductions and Welcome - Bill Burr
- 8:20 Scope of the Health and Mortality Study at ORAU
Overview and Results - Shirley Fry
- 8:50 Discussion and Questions -- SPEERA and CER
- 9:00 Tour of CER Data Collection Areas

Data Storage Vault
Display of Different Types of Data
Death Certificate Retrieval Area
Vital Status Follow-Up Systems
- 10:00 BREAK
- 10:30 Round Table Discussion

Data Collection
The Study Process
Exposure Assessment: Chemical and Radiation
The Data Model
Data Definitions: Raw, Intermediate, Analysis File
Confidentiality
Models of Data Sharing
Dissemination of Study Results to Workers
- 11:50 WRAP-UP